

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH

TO : File

DATE: November 20, 1974

FROM : Special Assistant for Technology

SUBJECT: Meeting among Drs. Ringler, DeBakey, Hegyeli and Dennis on November 15, 1974, concerning implementation of the plan of collaboration agreed upon in Houston October 19, 1974.

The Plan was critically reviewed and the memorandum prepared by Dr. Dennis on November 6 with suggestions as to patterns of implementation was similarly reviewed. Dr. DeBakey was somewhat hesitant to settle on specific items as suggested in my memorandum of November 6. He felt that it was better to see what the Russians want and what they feel they must do before making a firm suggestion. Under Item 1.3) an example in the discussion was the pacemakers, valves, and prostheses. These are all clinical already and it is questionable where one should draw the line as to what should be worked upon jointly with the Russians. Left ventricular assist devices are not yet clinical, but it is questionable whether they are yet ready for exchange. Perhaps it would be better for us to list all of these devices which are in the process of development and to get an elegant advisory committee to select which should be proposed for collaboration with the Russians. It was the consensus that we should not let the Russians make the selection. We in the Program might select a few of the members of this advisory committee ourselves and perhaps get recommendations from some special societies such as ASAIO. Dr. DeBakey was of the opinion that Dennis should continue to help. The difficulty in settling upon devices to consider is that the Russians do not have the necessary data or devices and that they want both, but that they do not have the ability to evaluate them as yet. Dr. DeBakey suggested that he and Dennis fix a catalog of devices and then pick an ad hoc group as suggested above. It was suggested that a formally organized committee be avoided for the moment; perhaps that Dennis and DeBakey do what they feel they can do and then get such consultants as appear to be appropriate.

It was agreed that following the meeting of December 6, the afternoon would be utilized in working on this list.

Dr. DeBakey expressed doubts about the wisdom of continuing with the total artificial heart program as it currently exists. The problem is that the basic scientific problems have not been solved and that one cannot run an integrated program unless the basic technology is well in hand. The people at Baylor are running an inhouse critique on the matter of the artificial heart and a copy of this will be sent to

Dr. Ringler. We must be very careful in regard to this because a decision on our part at the present time to pursue the artificial heart will be very upsetting to our relationship with the Russians. It was suggested that an ad hoc special committee be very quietly gathered in order to review all of this. It was agreed that there have been many benefits from the artificial heart program even though we do not have an artificial heart and the basic science to produce one has not yet been developed. Much information has come from the program with regard to valves, with regard to velour on vascular grafts, with regard to the physiologic understanding of controls of the heart (for instance, the nervous components), and with regard to the pyrolytic carbon surfaces. The criticism which both DeBaakey and Dennis put forward was that neither of us can see justification for iterative, unproductive, extravagant experiments, such as the 56 thermal implants performed at Travenol in an effort to get a survivor with a thermal engine, or such as the addition of three or four days of survival by virtue of spending tens of thousands of dollars at the University of Utah when there is precious little basic scientific information and when one knows that the mechanism of nonsurvival will be essentially as it has been in the previous animals and when one realizes that the basic problems have not been corrected.

It was agreed that we should at the present time not make any statements with regard to budget. At the present time of budgetary difficulty any announcement with regard to the proposed budget for the program of collaboration would almost certainly run into heavy opposition. It would be far better to make our plans quietly and go into the matter of costs only when inquiries are made concerning them.

With regard to item 1, 1), that of exchange of personnel between the United States and the U.S.S.R. it was agreed that there is no sense in sending junior people, but that the exchange should be made of top level investigators in the field. Three names that were suggested were John Kennedy, William Hall, and Clarence Dennis.

There appeared to be agreement that there is no point in talking about turning off all research with regard to the total artificial heart, but rather that there should be a change in the mechanism of approach to the problem. In other words, since systems engineering is successful only when the basic technology is well in hand, it would be far better to have these matters instigated by the grant mechanism.

Clarence Dennis, M.D., Ph.D.

cc: Dr. Ringler
Dr. Hegyeli